



### Comment on “On *Gonorynchus*, *Gonorhynchus*, *Gonorinchus*, *Gonorhynchus*, and *Gonorrhynchus*, and some other names of labeonine fishes (Teleostei: *Gonorhynchidae* and *Cyprinidae*)” by Kottelat (2016)

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Kottelat (2016) noted that ‘*Gonorhynchus* McClelland, 1838,’ the name used for a South Asian cyprinid genus recognized by Yang *et al.* (2012) and revised by Ciccotto & Page (2016), does not exist or is a junior homonym of *Gonorhynchus* Cuvier, 1816. He further noted that *Tariqilabeo* Mirza & Saboohi, 1990 is the valid genus name for the species recognized in *Gonorhynchus* by Yang *et al.* (2012) and by Ciccotto & Page (2016). Kottelat also rejected the placement of *Epalzeorhynchus bicornis* Wu, 1977 in this genus by Yang *et al.* (2012), instead placing it in the monotypic *Akrokolioplax* Zhang & Kottelat, 2006, and questioned the validity of the designation of the neotype of *Cyprinus latius* Hamilton, 1822 by Ciccotto & Page (2016). While we are in agreement with the validity of *Tariqilabeo*, we disagree with the use of *Akrokolioplax* and defend the designation of the neotype for *C. latius*.

Kottelat (2016) rejected the inclusion of *T. bicornis* in the genus *Tariqilabeo* because of the limited number of species included in the phylogenetic analysis of Yang *et al.* (2012), problems with the identity of *T. burmanicus* (Hora, 1936) based on personal observations, the presence of apparently homologous rostral flaps used to diagnose *Akrokolioplax* in species other than *bicornis*, and the “fugacity of molecular phylogenies when additional species or genes are analyzed.” However, none of these claims was supported with data, either morphological or molecular, or with independent analyses that rejected the nested placement of *T. bicornis* within a strongly supported clade of species of *Tariqilabeo* in the phylogeny of Yang *et al.* (2012). The phylogeny of Yang *et al.* (2012) was the result of a comprehensive analysis, including sequences from multiple mitochondrial and nuclear genes from almost all genera of labeonins. While it is certainly possible that the inclusion of additional taxa and genetic/genomic data could alter these phylogenetic relationships, rejecting such strong results because of the iterative nature of molecular phylogenies leads to taxonomy based on subjectivity rather than the scientific method. Based on the results of the phylogenetic analyses of Yang *et al.* (2012) and the morphological diagnoses of species of *Tariqilabeo* presented by Ciccotto & Page (2016), the valid name for this species is *T. bicornis*, and *Akrokolioplax* is a junior synonym of *Tariqilabeo*.

Kottelat (2016) also argued that the neotype designation of *T. latius* by Ciccotto & Page (2016) is invalid because a specimen was only designated due to the lack of a holotype. The text clearly stated otherwise. The neotype was designated because of remaining taxonomic uncertainties within *T. latius* and other populations in the genus, as stated: “[*T. latius*] will likely be included in future taxonomic research in the group.” Taxonomic problems remain with populations of *T. latius* outside the Bay of Bengal drainages examined as acknowledged by Ciccotto & Page (2016), specifically those from the Narmada and Ghaggar Rivers draining into the Arabian Sea. Of particular relevance are issues surrounding the recognition of *T. latius* and *T. diplochilus* (Heckel, 1838). Because of the morphological similarity of the two putative species, Ciccotto & Page (2016) hypothesized that populations recognized as *T. latius* and *T. diplochilus* may represent one species exhibiting morphological gradation across a large geographic range. Kottelat (2016) himself also noted problems with the identity of *T. burmanicus*, stating that “several species [are] confused under this name; pers. obs.”. The neotype was necessary to clarify the status of *T. latius* in accordance with Article 75.3.1 of the Code (ICZN 1999).

## References

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